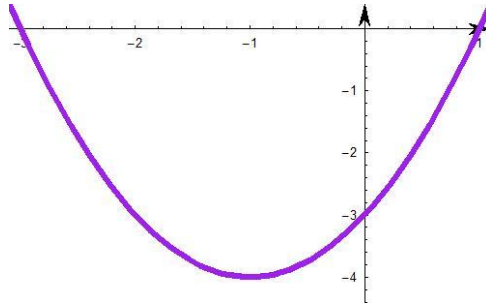


Parabola Knowledge Assessment

Name:

Period:

Use the graph below to complete the following questions:



$$y = 1x^2 + 2x - 3$$

general equation: $y = \mathbf{ax^2} + \mathbf{bx} + \mathbf{c}$

1. Explain the importance of the focus of a parabola. Place a dot in the approximate location of the focus and label it point **F** on the graph above.
2. Explain how doubling the value of **a** or using the value $2x^2$ will change to appearance of the parabola.
3. What impact would a negative value of **a** have on the appearance of the graph?

4. Explain how the graph would change if the value of **c** was changed to **c = +7**.

5. What change in the parabola would result from increasing the value of **b**?

6. Sketch the general shape and location for the function $y = 2x^2 - 8$ on the axis below. Explain how you determined the location and orientation of the parabola.

